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## COMPLETE SPECIFICATION.

## Improvements in or relating to Brassieres and like Garments.

We, BERLEH (U.K.) LIMITED, a British Company, of Berlei House, Bath Road, Slough, Buckinghamshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to brassieres and like bust-supporting garments for women and has as an object the provision of an improved construction affording better and more natural support to the bust with greater freedom and flexibility of movement of the body.

In a bust-supporting garment for women constructed in accordance with the invention and comprising two breast supporting cups either attached to or forming part of a body-encircling band and a shoulder strap or equivalent means for providing upward support for each cup, the centre point of the upper edge of each cup is connected to said shoulder strap or equivalent supporting means by way of an elastic coupling while the said centre point of the upper edge of each cup is also connected to one end of a non-extensible strap of tape or the like which then extends upwardly parallel to said elastic coupling to a sliding connection with said shoulder strap or equivalent means and thereafter passes downwardly and outwardly away from the front centre line of the garment to a direct connection with the associated cup at a point lying substantially in the horizontal plane through the centres of the breast cups.

In a particular embodiment of the invention each of the breast-supporting cups is formed with a lower breast-supporting half-portion of substantially non-extensible fabric and an upper cover half-portion, and the

shoulder strap or equivalent means for providing upward support for each cup is connected by way of an elastic coupling to the central apex point of the upper half-portion of the cup while a non-extensible strap of tape or the like is connected at one end also to said apex point and is arranged to extend therefrom first upwardly parallel with said elastic coupling to a sliding connection with said shoulder strap or equivalent means and then to pass downwardly and outwardly away from the front centre line of the garment to a direct connection with the upper edge of said lower half-portion of the cup.

In order that the nature of the invention may be more readily understood, one particular embodiment thereof will now be briefly described by way of illustrative example with reference to the drawing accompanying the Provisional Specification in which:—

Fig. 1 is an elevational view of the outwardly facing side of a brassiere constructed in accordance with the invention, the two ends of a divided body encircling band being separated and the garment laid substantially flat.

Fig. 2 is a fragmentary cross-sectional detail view taken on the line II—II of Fig. 1.

The brassiere shown in Fig. 1 comprises a band 10 adapted to encircle the body in the region of the bust together with shoulder straps 11. The band 10 consists of a lower front section 12, conveniently of non-extensible fabric material, and two similar side and rear sections 13, 14 each connected to the front section 12 by way of an elastic insert 15. The end of the section 14 opposite that connected to the elastic insert 15 has an elastic extension 16 secured thereto and the free end of the latter is provided with suitable fastening means 17a for co-operation with

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complementary fastening means 17b on the free end of the section 13 whereby the band 10 may readily be secured around and removed from the body of the wearer.

5 Forming part of the band 10 are two breast-supporting cups indicated generically at 20. Each of these cups includes a lower and breast-supporting half-portion 21 made of substantially inelastic or non-stretch material and secured along a major part of its lower marginal edge to the upper edge of the front section 12. Each cup 20 also includes an upper cover half-portion 22 made of light weight and preferably slightly extensible material secured along its lower edge to the upper edge 23 of the lower half-portion 21. The upper half-portion 22 is shaped in conventional manner to define a central apex point 24 to which is attached the lower end of an elastic coupling 25 in the form of a loop of elastic tape passing through a slot 26 in a slide frame 27. Each slide frame 27 consists of a flat element of substantially rigid material, such as a moulded synthetic plastic material and provided with three adjacent and parallel slots as shown also in Fig. 2. The other slots 28 in such frame 27 operate to receive the end of a shoulder strap 11 whereby the effective length of such shoulder strap may be adjusted to suit the wearer. The opposite ends of the two shoulder straps are secured respectively to the free ends of the sections 13, 14.

35 In addition to the elastic coupling 25, for each breast cup, there is also provided a non-extensible strap or tape 30 which is connected at one end to the apex point 24 of the cup and which extends upwardly parallel with and in between the two parts of the loop of tape forming the elastic coupling, then through the slot 26 and thereafter is directed downwardly at an angle inclined to the vertical to a point 31 on the upper edge 23 of the lower half-portion of the cup, such point being disposed outwardly with respect to the central front line of the garment and near to the junction between the cup and its adjacent side section 13 or 14. At this point 31, which lies substantially in the horizontal plane passing through the two centre points of the breast cups 10, the strap 30 is firmly connected by stitching to the lower half-portion of the cup.

55 By means of the construction described any movement of the wearer which tends to increase the upward pull of the shoulder strap on the apex point 24 of either breast cup causes some extension of the associated elastic coupling 25 and this is automatically accompanied by a corresponding increase in length of that part of the associated strap 30 lying between the apex point and the slide frame 27. This, in turn, shortens by a similar amount the length of the strap 30

lying between the slide frame 27 and the related anchorage point 31 whereby a corresponding lifting movement is imparted to the outer side of the breast cup.

While the invention has been described with reference to one particular form or style of brassiere, it will be obvious that it may be applied to other styles of such garment and also to other similar garments, such as foundation garments, which incorporate a bust-supporting part of brassiere form. Instead of a separate shoulder strap for providing upward support for each breast cup, a single neck halter having its opposite ends connected to the respective breast cups may be employed.

#### WHAT WE CLAIM IS:—

1. A bust-supporting garment for women comprising two breast-supporting cups either attached to or forming part of a body-encircling band and a shoulder strap or equivalent means for providing upward support for each cup in which the centre point of the upper edge of each cup is connected to said shoulder strap or equivalent supporting means by way of an elastic coupling and in which said centre point of the upper edge of each cup is also connected to one end of a non-extensible strap of tape or the like which then extends upwardly parallel to said elastic coupling to a sliding connection with said shoulder strap or equivalent means and thereafter passes downwardly and outwardly away from the front centre line of the garment to a direct connection with the associated cup at a point lying substantially in the horizontal plane through the centres of the breast cups.

2. A bust-supporting garment according to Claim 1 wherein each of said breast-supporting cups is formed with a lower breast-supporting half-portion of substantially non-extensible fabric and an upper cover half-portion said shoulder strap or equivalent means being connected by way of said elastic coupling to the central apex point of the upper half-portion of the cup and said non-extensible strap of tape or the like being connected at one end also to said apex point and at the other end directly to the upper edge of said lower half-portion of the cup.

3. A bust-supporting garment as claimed in Claim 1 or 2 in which said shoulder strap or equivalent support means is arranged to be connected to said elastic coupling and to means for providing said sliding connection with said non-extensible strap in a manner permitting alteration of the effective length of such shoulder strap or equivalent support means.

4. A bust-supporting garment as claimed in Claim 3 which includes a pair of multi-slot slide frames for interconnecting said

shoulder straps or equivalent support means with said elastic couplings and said non-extensible straps of said breast cups.

5. A bust-supporting garment as claimed in Claim 4 in which each of said elastic couplings is in the form of a loop of elastic tape passing through a slot in the associated slide frame and secured by each of its ends to the associated breast cup.

6. A bust-supporting garment as claimed in Claim 5 in which one end of each of said non-extensible straps is arranged to lie

within the associated loop of elastic tape and to pass through the same slot in the associated slide frame.

7. A brassiere substantially as described with reference to the drawing accompanying the Provisional Specification.

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#### PROVISIONAL SPECIFICATION.

#### Improvements in or relating to Brassieres and like Garments.

We, BERLEI (U.K.) LIMITED, a British Company, of Berlei House, Bath Road, Slough, Buckinghamshire, do hereby declare this invention to be described in the following statement:—

This invention relates to brassieres and like bust-supporting garments for women and has as an object the provision of an improved construction affording better and more natural support to the bust with greater freedom and flexibility of movement of the body.

In a construction embodying the invention each breast-supporting cup, which is either attached to or forms part of a body-encircling band, is formed with a lower breast-supporting half-portion of substantially non-extensible fabric and with an upper cover half-portion which may be of extensible fabric, the related shoulder strap or equivalent member for providing upward support for each cup being connected by way of an elastic coupling to the central apex point of the upper half-portion of the cup while a non-extensible strap of tape or the like, connected at one end also to said apex point of the upper half-portion of the cup, extends first upwardly parallel with said elastic coupling to a sliding connection with said shoulder strap or equivalent means and then passes downwardly and outwardly at an inclined angle to a direct connection with the upper edge of said lower half-portion of the cup.

In order that the nature of the invention may be more readily understood, one particular embodiment thereof will now be briefly described with reference to the accompanying drawing.

The brassiere shown in Fig. 1 comprises a band 10 adapted to encircle the body in the region of the bust together with shoulder straps 11. The band 10 consists of a lower front section 12 and two similar side and rear sections 13, 14 each connected to the front section 12 by way of an elastic insert

15. The end of the section 14 opposite that connected to the elastic insert 15 has an elastic extension 16 secured thereto and the free end of the latter is provided with suitable fastening means 17a for co-operation with complementary fastening means 17b on the free end of the section 13 whereby the band 10 may be secured around the body.

Forming part of the band 10 are two breast-supporting cups indicated generically at 20. Each of these cups includes a lower and breast-supporting half-portion 21 made of substantially inelastic or non-stretch material and secured along a major part of its lower marginal edge to the upper edge of the front section 12. Each cup 20 also includes an upper cover half-portion 22 made of light and preferably slightly extensible material secured along its lower edge to the upper edge 23 of the lower half-portion 21. The upper half-portion 22 is shaped in conventional manner to define a central apex point 24 to which is attached the lower end of an elastic coupling 25 in the form of a loop of elastic tape passing through a slot 26 in a slide frame 27, see also Fig. 2 which is a longitudinal section on line II—II of Fig. 1. Other slots 28 in such frame 27 operate to receive the end of a shoulder strap 11 whereby the effective length of such shoulder strap may be adjusted to suit the wearer. The opposite ends of the shoulder straps are secured respectively to the free ends of the sections 13, 14.

In addition to the elastic coupling 25, for each breast cup, there is also provided a non-extensible strap or tape 30 which is connected at one end to the apex point 24 of the cup and which extends upwardly parallel with and in between the two parts of the loop of tape forming the elastic coupling, then through the slot 26 and thereafter is directed downwardly at an angle inclined to the vertical to a point 31 on the upper edge 23 of the lower half-portion of the cup, 110

- such point being disposed outwardly with respect to the central front line of the garment and near to the junction between the cup and its adjacent side section 13 or 14.
- 5 At this point 31, the strap 30 is firmly connected to the lower half-portion of the cup.
- 10 By means of the construction described any movement of the wearer which tends to increase the upward pull of the shoulder strap on the apex point 24 of either breast cup causes some extension of the associated elastic coupling 25 and this is automatically
- 15 accompanied by a corresponding increase in length of that part of the associated strap 30 lying between the apex point and the slide frame 27. This, in turn, shortens by a similar amount the length of the strap 30

lying between the slide frame 27 and the related anchorage point 31 whereby a corresponding lifting movement is imparted to the outer side of the breast cup. 20

While the invention has been described with reference to one particular form or style of brassiere, it will be obvious that it may be applied to other styles of such garment and also to other similar garments, such as foundation garments, which incorporate a bust-supporting part of brassiere form. 25 30

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